Section 15

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1. Glossary

µGy	Micro Gray - x-ray dose 1Gy= 0.87 x 10^{-2} J/kg
A/D Converter	**A**nalog **D**igital **C**onverter
ADC	**A**gfa **D**iagnostic **C**enter
AOS	**A**donis **O**perating **S**ystem Operating system for Agfa CPU's (Gemini, Goliath, David)
APIP	**A**gfa **P**icture **A**rchiving **P**rotocol
ASCII	(**A**merican **S**tandard **C**ode for **I**nformation **I**nterchange) The predominant method for encoding 7-bit characters on a personal computer. HTML, tags and URLs must be in ASCII.
AUI	**A**ttachment **U**nit **I**nterface (External „Box“ to connect to a network)
BER board	Basic Ethernet and ROCAN interface One of the three circuit boards which are plugged on the CPU board GEMINI. The BER board controls the Ethernet and SCSI interface, two serial ports and the communication with the floppy drive. ROCAN interface to VME.
BSP	**B**oot **S**upport **P**ackage: boot program for Agfa CPU's
Calibration	Procedure on ADC to make a homogeneous exposure look like such on film. Algorithm to counter balance irregulatities in the Scanner of ADC.
CCM	**C**onfiguration and **C**ustomization **M**anager (Tool, to edit the configuration file adc.cpf)
CD-ROM	Compact Disk - Read only memory
CHM	**C**assette **H**andling **M**odule
Collimation	Determination of the region in the image where the interesting data is at. On that region the image processing is applied..
Controller	Is connected ahead the laser recorder. The controller is responsible for the image reception from the diagnostic equipment, the image processing, layout of the images on the film, and image transmission to the machine.
CPU	**C**entral **P**rocessing **U**nit. - Microprocessor - Board with microprocessor chip.
CPU GEMINI board	Board which controls the main functions of the digitizer; central processing unit.
CR	Computer Radiography
CT	Computer Tomograph
DAC	**D**igital **A**nalog **C**onverte**r**
Dark Current Compensation	Offset for Photomultiplier dark current before scanning the IP. Not used in ADC Digitizer!

Decomposition	Th original image is being split up in a set of bandpass-filtered images
Diagnostic Logger	Tool on ADC to keep a lot of reduced images with the corresponding image data on the HD.
DICOM	**D**igital **I**maging and **CO**mmunication in **M**edicine
DIPS	**D**igital **I**mage **P**rocessing **S**tation
Dose, x-ray dose	= kV x mA x sec see also µG = Mikro Gray
Dosimeter	Device to measure x-ray dose
DRA	**D**irect **R**emote **A**ccess (external product name: AGFATEC LINK)
DSH	Density Sensor head
Dynamic Range	Exposure range in which ADC can get usable image data.
ECU	Embedded Controller Unit (C Module)
EMC	Electromagnetic Compatibility.
EMI	Electromagnetic Interference.
EPLD	Erasable, programmable logic device.
EPROM	Erasable, programmable read only memory.
Ethernet	Frequently spread technologies for LANs (Local Area Networks)
FAQ	(Frequently Asked Questions) A common type of document on the Internet that contains a list of questions and answers on a common theme. On the World Wide Web, questions are often hyperlinks to the answers.
FDDI	Fiber Distributed Data Interface
FIFO	First in, first out principle which can be used for instructions and for data processing.
Floppy	Floppy Disk Drive
FOI	**F**iber **O**ptic **I**nterface. Digital interface for the transmission of image and control data via a light-leading fibre.
FSE	**F**ield **S**ervice **E**ngineer
FTP	**F**ile **T**ransfer **P**rotocol. The Internet service that transfers files from one computer to another. (Program used for transmission of files in the Internet)
Gemini	CPU of VME
Grid	- to reduce scattered radiation - to increase sharpness
GSC	**G**lobal **S**upport **C**enter
GUI	**G**raphical **U**ser **I**nterface (V)DIPS
Heel Effect	inhomogenious exposure
HeNe Laser	**He**lium **Ne**on Laser

HIS	**H**ospital **I**nformation **S**ystem
Histogram	graphical display of the distribution of gray levels
Host	See server.
Host name	See network location.
HT power supply	**H**igh **T**ension power supply
HUB	Switchbox (Hard- or Software) which switches or multiplexes different channels, e.g. AMDI and Service Channel.
I/O BUS	**I**nput / **O**utput **BUS**. System consisting of a defined cable, cable connection, and signal for the parallel transmission of control data. The machine uses a bus system of 8 V level and 26 parallel lines.
ID Station	**ID**ENTIFICATION Station
IMOS	**I**MAGE **MO**NITOR **S**OFTWARE --> succession for SMA
Intranet	Internal web- site corresponding to the www standard. It is just accessable to members of a company or those who are allowed to use those internal sites, made out by the company.
IP	(Internet Protocol) Internet software that divides data into packets for transmission over the Internet. Computers must run IP to communicate across the Internet. See also TCP.
IP	for ADC: **I**mage **P**late (phosphor plate)
IP-Adresse	(Internet Protocol Adress) The standard method which identifies an internet connected computer.
ISDN	Integrated Services Digital Network
ISO	International Standardization Organisation
ISR	Interface Status Report
LAN	**L**ocal **A**rea **N**etwork. Network technologie, designed to connect computers over short distances. It is possible to connect the LAN with the internet or to make a configuration into an intranet.
Laser	**L**ight **A**mplification by **S**timulated **E**mission of **R**adiation: The helium neon laser emits red light of a wavelength of 633 nm. High voltage applied at the laser activates the electrons of the helium to provide a strong, coherent, monochromatic light beam.
Leeds Phantom	Image plate to check the technical image quality of the ADC. The Leeds Phantom is developed for Agfa by the university of Leeds.
Low Pass Filtering	Butterworth filter in SAB - Board to eliminate frequencies > 250 kHz.
LUT	**L**ook **U**p **T**able
MAU	**M**edium **A**ttachment **U**nit; physical adaption betreen transmission medium and tranceiver cable.
MD - Plate	AGFA MD -> **M**edium **D**efinition image plate

MFA	**M**achine **F**actor **A** - Machine specific value indicating the photo multiplier sensitivity - MFA is the log of the PM high voltage which results in a scan average level SAL1800 at a given dose of 1mR (~20 µGy) and a speed class 200
MFB	**M**achine **F**actor **B**
MG	Medical Gateway
MODEM	**MO**DULATOR **DEM**ODULATOR
Monitor	- lowest software level on CPU (like BIOS on DOS systems) - stored on EEPROM
mR	**m**illi **R**öntgen, measure for x-ray dose - 1 mR corres. 8.7 uGy
MUSICA	**MU**LTIBLE **S**cale **I**mage **C**ontrast **A**mplification (Agfa Image Processing)
Network location	In a URL, the unique name that identifies an Internet server. A network location has two or more parts, separated by periods, as in my.network.location. Also called host name and Internet address.
NM	Nuclear Medicine
Node	Nodes in the I/O bus system = printed circuit board in the I/O bus.
Nullmodem	RS 232 (RS242) cable with crossed Transmitt / Receive Line
OEM	Original Equipment Manufacture
OLUT	**O**utput **L**ook-**U**p **T**able
PACS	Picture Archiving and Communication System
Password	A text string that allows a user access to a service, if the service requires it.
PCB	Printed circuit board.
PD-Factor	**P**in **D**iode factor (mW/V) The Pin diodes are used for indirect measuring of the laser power. Due to the fact that not all diodes have the same sensitivty a device specific constant, the pd_factor, has to be determined. The measured Pin diode signal multiplied with the pd_factor results in the laser power. Formula: pd-signal (V) x pd_factor (mW/V) = Laser power (mW)
Photomultiplier	opto - electronical sensitive device to convert light (laser emmision) in current and with a I / V -Converter into voltage
Pixel	One small printing point on the film. See also: Resolution
PMT	**P**hoto **M**ultiplier **T**ube
Preview Monitor	displays the image and the name of the patient. This monitor enables to roughly check whether the exposure was successful.

PRID	**PR**EVIEW and **ID** Station, installed on one PC
PS	**P**rocessing **S**tation
Pyramidal Image	Image file format of images on (V)DIPS
Quantisation	compression of image files
RAM	Random Access Memory
RAM - DISK	- virtual harddisk simulated in the CPU main memory - Gemini RAM-Disk contains all the machine dependant parameters, e.g. stepper motor steps, info counters
RAS	Fileformat for screen images of SUN Microsystems.
RDS	Removable Disk System used for storage of images on removable disk cartridge.
REM Tool	Debugging tool for AOS logfiles
Reset	Machine reset into a defined machine status. Various checking routines are carried out during a reset.
Resolution	Dots or pixels per inch. One parameter to show the quality of a printer. The Drystar 3000 uses 320dpi what fits all medical applications except digital mammography. Compared to an office printer 320 dpi is not too much. But in opposite to office printers, the Drystar 3000 can print nearly an infinite number of greysteps per dots. Office printers only have one level per dot.
RIS	**R**adiology **I**nformation **S**ystem
RMS	Rotating Shutter motor Driver Board
ROCAN bus	ROAM (=R&D department in Mortsel) Controlled Area Network
ROM	**R**ead **O**nly **M**emory
RS232 interface	Serial interface which converts computer internal parallel information into serial bits, and vice versa.
SAB	**S**can **A**cquisition **B**oard
SAL	**S**can **A**verage **L**evel - Digitized photo multiplier signal of an average of several hundred scanned lines - Range SAL0 - SAL4095 (12bit)
SCB	**S**can **C**ontrol **B**oard
SCP	**S**OFT**C**O**P**Y Tool
SCSI	**S**mall **C**omputer **S**ystems **I**nterface
Server	A computer that offers services on a network. On the World Wide Web, the server is the computer that runs the Web server program that responds to HTTP protocol requests by providing Web pages. Also called host.
Server-name	The name in a URL that definitely indntifies the internet-server. It is also called host-name or internet-adress.
Service interface	RS232 standard interfae for the connection of the Service PC.

Shell	User Interface of the VME - AOS
SMA	**S**ERVICE **MA**NAGER PC based service Program for ADC 70 Digitizer --> IMOS
SMTP	(Simple Mail Transport Protocol) The Internet protocol, specified by RFC 821, that governs the exchange of electronic mail.
Speed Class (SC)	Dose=1mR + SC100 => D=1 above fog + base A film-screen-system with speed class 100 which is exposed with a dose of 1mR results in a density 1 above fog+base.
Square Root Compression	Signal ~ $\sqrt{N}$. Method to quantisize Signal in 12 similar block sizes
TCP	**T**ransmission **C**ontrol **P**rotocol. Internet networking software that controls the transmission of packets of data over the Internet. Among its tasks, TCP checks for lost packets, put the data from multiple packets into the correct order, and requests that missing or damaged packets be resent. Computers must run TCP to communicate with World Wide Web servers.
TCP/IP	**T**ransport **C**ontrol **P**rotocol / **I**nternet **P**rotocol. Common Protocol for Networks. Used in the Internet
Terminating resistor	Resistor of 75W / 50W , used for termination of videosignals / ethernet.
Testsheet	Image plate with testpattern, print to check the geometric qualtity of ADC:
Text Field	Part of the film displaying patient, hospital and image processing information
UI	**U**ser **I**nterface (PRID, (V)DIPS)
UPS	**U**ninterraptable **P**ower **S**upply
UTP	**U**nshielded **T**wisted **P**air (Network transfer medium)
VGA - Board / Monitor	**V**ideo **G**raphics **A**dapter
VIPS	**V**iewing **I**mage **P**rocessing **S**tation
VME	**V**ersa **M**odule **E**urope
VME bus	**V**ersa **M**odule **E**urope **bus**. Bus for the parallel image data transmission. 16 bit bus.
W/L	**W**indow and **L**eveling
WAN	Wide Area Network
WS	**W**ork **S**tation, based on UNIX
X-Rite densitometer	Automatic density measuring instrument manufactured by X-Rite.